UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/596,359 | 06/09/2006 | Hajime Kando | 36856.1450 | 5636 |

54066        7590        10/28/2008
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| EXAMINER |
|---|
| ROSENAU, DEREK JOHN |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2834 | |

| NOTIFICATION DATE | DELIVERY MODE |
|---|---|
| 10/28/2008 | ELECTRONIC |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | Application No. | Applicant(s) |
|---|---|---|
| **Advisory Action** **Before the Filing of an Appeal Brief** | 10/596,359 | KANDO, HAJIME |
| | Examiner | Art Unit |
| | Derek J. Rosenau | 2834 |

*--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

THE REPLY FILED <u>10 October 2008</u> FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

   a) ☒ The period for reply expires <u>3</u> months from the mailing date of the final rejection.

   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

      Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

<u>NOTICE OF APPEAL</u>

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

<u>AMENDMENTS</u>

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will <u>not</u> be entered because

   (a)☒ They raise new issues that would require further consideration and/or search (see NOTE below);

   (b)☐ They raise the issue of new matter (see NOTE below);

   (c)☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d)☐ They present additional claims without canceling a corresponding number of finally rejected claims.

      NOTE: *See Continuation Sheet.* (See 37 CFR 1.116 and 41.33(a).)

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: <u>23-42</u>.

   Claim(s) withdrawn from consideration: _____.

<u>AFFIDAVIT OR OTHER EVIDENCE</u>

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will <u>not</u> be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will <u>not</u> be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

<u>REQUEST FOR RECONSIDERATION/OTHER</u>

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: <u>See Continuation Sheet.</u>

12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.

13. ☐ Other: _____.

/Quyen P Leung/
Supervisory Patent Examiner, Art Unit 2834

U.S. Patent and Trademark Office

Continuation of 3. NOTE: the newly presented claims contain subject matter that has not been previously considered, and would require further search and/or consideration.


Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments field 10 October 2008 have been fully considered, but they are not persuasive. Applicant argues that none of Itakura et al., Taniguchi, Takayama et al., and Nakahata et al. discloses boundary acoustic wave devices. However, both Itakura et al. and Nakahata et al. disclose boundary acoustic wave devices, as can be seen in figure 1 of Itakura et al. and at least figure 40 of Nakahata et al. Applicant argues that Takayama et al. does not disclose that "a thickness of the electrodes is set so that the acoustic velocity of an SH type boundary acoustic wave is lower than the acoustic velocity of a slow transverse wave propagating through the solid layer and the acoustic velocity of a slow transverse wave propagating through the piezoelectric single crystal substrate" However, this is simply functional language, which is not what Takayama was cited for. Takayama was cited for its teaching of electrode thickness, which in combination with Itakura et al. and Taniguchi, results in a device having each of the claimed structural elements. As this combination has each of the claimed structural elements, the structure resulting from the combination would be capable of the same functions as the claimed structure. Applicant argues that the device of Itakura et al. is a surface acoustic wave device, and that it is not a boundary acoustic wave device, saying that the silicon dioxide layer provided over the electrodes does not make the device a boundary acoustic wave device. However, a device may be both a surface acoustic wave device and a boundary acoustic wave device. The device of Itakura et al. generates a surface acoustic wave along the boundary between the zinc oxide layer and the silicon dioxide layer; therefore, the device of Itakura et al. is a boundary acoustic wave device. Applicant argues that because Takayama et al. discloses only a surface acoustic wave device and does not disclose that "the acoustic velocity of an SH type boundary acoustic wave is lower than the acoustic velocity of a slow transverse wave propagating through the piezoelectric single crystal substrate". However, it is Itakura et al. that teaches a boundary acoustic wave device, and Takayama that teaches the electrode thickness that, in combination with Itakura et al., would result in the claimed functional limitations. Applicant argues that Taniguchi does not disclose that "H>8261.744p^(-1.376), when p represents the density of the electrodes, H(lambda) represents the thickness of the electrodes, and lambda represents the wavelength of a boundary wave", arguing that lambda can not simply be chosen arbitrarily, as the wavelength of a given acoustic wave device is determined based on the characteristics of the IDT electrodes. However, the claim language does not contain any limitation directed to the characteristics of the IDT electrodes or the wavelength of the device; therefore, as the combination of Itakura et al., Taniguchi, and Takayama et al. discloses each of the claimed structural elements, the structure resulting from that combination would have the same properties. Applicant argues that there would be no reason or motivation to combine the teachings of Nakahata et al. with the device of Itakura et al. as modified by Taniguchi and Takayama et al., arguing that the acoustic velocity of 8000 m/s is not a result of the crystalline orientation. However, it would be obvious to combine the teachings of Nakahata et al. for the benefit of improved coupling coefficient (column 2, lines 29-42). In addition, it has been held that optimization by routine experimentation would be obvious to a person of ordinary skill in the art (In re Aller, 105 USPQ 233). As the Euler angles of the lithium niobate crystals can be chosen by routine experimentation, it would be obvious to a person of ordinary skill in the art to select a crystal having Euler angles that yield the desired properties.